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Building & Highway Material Testing Laboratory

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.08/KR/WMM/Gradation/2014-15

07.08.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. K. Rajesh,** Contractor, Bangalore.

Name of Work : Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.

Reference : AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014

Date of Testing : 07.08.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **26020**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	985	985	3.8	96.2	95-100
22.4	6145	7130	27.4	72.6	60-80
11.2	5260	12390	47.6	52.4	40-60
4.75	4285	16675	64.1	35.9	25-40
2.36	3850	20525	78.9	21.1	15-30
0.600	2515	23040	88.5	11.5	8-22
0.075	2380	25420	97.7	2.3	0-8

Note:

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Job No.: CTCE/BBMP/W.No.08/KR/WMM/AIV/2014-15

06.08.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Mr. K. Rajesh,** Contractor, Bangalore.
Name of the Work	Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.
Reference	AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	06.08.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines	22.08	22.28	
	100* (W_2/W_1)%			22.18

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.08/KR/WMM/S-T/2014-15 06.08.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Mr. K. Rajesh,** Contractor, Bangalore.
Name of Work	Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.
Reference	AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	06.08.2014

Civil-Tech Consultants & Engineers Bangalore

Result : Flakiness Index = **12.35%**

Elongation Index = **13.63%**

Result : Combined Flakiness & Elongation index **25.98%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.08/KR/SDBC/AIV/2014-15

13.08.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Mr. K. Rajesh,** Contractor, Bangalore.
Name of the Work	Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.
Reference	AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	13.08.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	80	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	302	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	20.58	20.94	**20.76**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CTCE/BBMP/W.No.08/KR/SDBC/Shape_T/2014-15 : 13.08.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Mr. K. Rajesh,** Contractor, Bangalore.
Name of Work	: Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.
Reference	: AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014
Technical Reference	: IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	: Semi Dense Bituminous Concrete
Date of Testing	: 13.08.2014

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Result : Flakiness Index = **12.58%**

Elongation Index = **13.65%**

Result : Combined Flakiness & Elongation index **26.23%**

Comments:

Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Job No.: CTCE/BBMP/W.No.08/KR/SDBC/Stripping/2014-15 13.08.2014

Stripping Value of Road Aggregates (Static Immersion Test)

IS: 6241

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Mr. K. Rajesh,** Contractor, Bangalore.
Name of the work	Asphalting to Roads and Improvements of Drains in Bhadrappa Layout Maruthi Nagara surroundings in Ward No.08, BBMP, Bangalore.
Reference	AEE/KG/(WO)/9202/2014-15 Dated: 04.08.2014
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	13.08.2014

Type of binder : 80/100
Percentage of binder used : 5.0% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.0 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.3	3.40	96.60
2	3.4		
3	3.5		

Comments:

→ Minimum allowable Aggregate retained coating for Semi Dense Bituminous Concrete is 95%

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